Economic Analysis of Electronic National Agriculture Market in Haryana

ईकनॉमिक् एनालिसिस ऑफ इलेक्ट्रॉनिक नेशनल एग्रीकल्चर मार्किट इन हरियाणा

A

Synopsis

Submitted to

DEPARTMENT OF ECONOMICS

CHAUDHARY DEVI LAL UNIVERSITY, SIRSA

In partial fulfilment of the requirements

for the degree of

DOCTOR OF PHILOSOPHY

IN

ECONOMICS

Supervised By:

Prof. (Dr.) Abhey Singh

Chairperson,

Department of Economics

C.D.L.U., Sirsa

Submitted By:

Kiran

Reg. no:-2018035500174546

Department of Economics

Chaudhary Devi Lal University,

Sirsa-125055 (Haryana)

Economic Analysis of Electronic National Agriculture Market in Haryana

Introduction

Agriculture sector plays a crucial role in the Indian Economy. It has a greater importance in sustainable development of the economy. The goal of sustainable development cannot be achieve without the sustainable growth of this sector. It is the largest sector of India's economy and still the largest employment providing sector of the economy. It contributes significantly to production, employment, demand generation, capital formation and exports through various backward and forward linkages. However, in recent times, it has lost its importance in relative terms. According to the Economic Survey of India, 2018-19, the share of agriculture, forestry and fishing sector in Gross Value Added (GVA) has seen a steady over the years from 15.4 per cent in 2015-16 to 14.4 per cent in 2018-19. The decline was mainly due to decline in the share of crops in GVA from 9.2 per cent in 2015-16 to 8.7 per cent in 2017-18. There are a lot of factors responsible for the declined share of crops in GVA but one of these is that the agriculture sector is highly vulnerable to the uncertainties of nature that impact the crop enterprise at its production. Further, this sector is also exposed to the current weaknesses of the agriculture marketing system. The annual income of a farmer depends upon both yield and the price that his produce fetches. Government has rolled out a large number of programs to improve yield levels on sustainable basis; it recognizes the need for creating a competitive market structure in the country that will generate marketing efficiency. Only when the market is integrated over time and space, can market efficiency be realized.

In this context, for overcoming the challenges of present agricultural marketing system and to increase the income of farmers with incidental benefit of moderating price rise, Government approved a central sector scheme "Promotion of National Agriculture Market (NAM) through Agri-Tech Infrastructure Fund (ATIF) on 01st July, 2015 with a budget allocation of Rs. 200 crore. National Agriculture Market as electronic trading platform was initially launched in pilot phase on 14th April 2016 in 8 states across country. It networks the existing Agricultural Produce Market Committee (APMC) mandis to create a unified national market for

agricultural commodities. This common online system has assisted all the APMC related to the information and services through single window system. It has the vision to promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.

NAM is a "virtual" market but it has a physical market at the back end. The details of registration of farmers / sellers, lot details at the entry gate, weighment, quality assaying, auctions / trade transactions, payment by buyers to sellers and other agencies involved in the chain of transaction takes place online on e-NAM while the actual material flow happens physically through the market. It provides all the information of prices, arrivals and trade offers for available commodities. During the launch of e-NAM, 21 APMCs from these eight states and 25 commodities were linked to this unified portal. By March 2017, totally 455 markets from 13 states were integrated with this system. So far, 585 wholesale regulated markets in 16 states and 2 union territories have been connected to e-NAM. (www.enam.gov.in).

Small Farmers Agribusiness Consortium (SFAC) is the lead agency for implementing e-NAM under the aegis of Ministry of Agriculture and Farmers' Welfare, Government of India. For implementation of e-NAM, SFAC selects a Strategic Partner (SP) by the Executive Committee of SFAC headed by the Secretary of Department of Agriculture, Co-operation and Farmers welfare (DAC&FW). To develop and maintain e-NAM Portal, M/s Nagarjuna Fertilizers and Chemicals Limited, (NFCL) has been appointed as Strategic Partner for a period of five years from the date of signing the contract agreement i.e. 23.12.2015. To facilitate e-trading platform, SFAC hires consultants and support staff on contract basis and set up a dedicated Project Management Unit (PMU) manned with subject matter specialists. SFAC as lead promoter of e-NAM carries out all administrative and management functions with respect to implementation. Thus, e-NAM system was implemented with the following objectives as given below:

1. To integrate markets first at the level of the States and eventually across the country through a common online market platform, to facilitate Pan - India trade in agricultural commodities.
2. To streamline marketing / transaction procedures and make them uniform across all markets to promote efficient functioning of the markets;

3. To promote better marketing opportunities for farmers / sellers through online access to more buyers / markets, removal of information asymmetry between farmer and trader, better and real-time price discovery based on actual demand and supply of agri-commodities, transparency in auction process, prices commensurate with quality of produce, online payment etc. that contribute to marketing efficiency
4. To establish quality assaying systems for quality assurance to promote informed bidding By buyers
5. To promote stable prices and availability of quality produce to consumers. (e-NAM guidelines, www.enam.gov.in)

The scheme is also being implemented in the Haryana state from the time of its launch. Recently, 54 mandis are linked with e-NAM in Haryana. Out of 54 mandis, 37 have been connected in 1st phase of e-NAM and the rest in the next phases. The Haryana State Agricultural Marketing Board has been assigned the task of connecting the mandis under e-NAM platform (*Economic Survey of Haryana, 2016-17)*. Under this project, Haryana has traded 1,150.42 lakh quintals of an amount of Rs. `26,823.02 crores. Haryana is also the first state to start the payment online through e-NAM portal in Charki Dadri. The state stands 1st in country in terms of maximum invoices in e-payments with 17,368 invoices valuing 31.82 crore benefiting 5,305 farmers till 31st December, 2018. All the 54 APMCs have started the online payments through e-NAM. Assaying laboratories have also been established in all these mandis that have been electronically linked with e-NAM. (Economic Survey of Haryana, 2018-19). Now, e-NAM system has become an innovative online trading mechanism in the state as it provides all the information about the prices and arrivals of agricultural commodities to the stakeholders. Keeping in the view, the importance of e-NAM platform in the context of improving present agricultural marketing system, the present study is designed with the following specific objectives;

Objectives of the Study

1. To study the extent of operation and adoption of Electronic National Agriculture Market of selected Agricultural Produce Market Committees in Haryana.
2. To analyze the impact of Electronic National Agriculture Market on prices and arrivals of major commodities in the study area.
3. To assess the impact of Electronic National Agriculture Market on the income of farmers.

4. To identify the constraints in the operation of Electronic National Agriculture Market system faced by the stakeholders.

Review of literature

Kumar et al. (2016) in their study "e-NAM: connecting farmers and traders" explained about e-NAM, objectives of e-NAM such as without any precondition liberal licensing of traders, buyers and commission agents, provision for quality assaying infrastructure in every market, reduction in book keeping, reduction in manpower requirements, completely transparent system, single point levy of market fees reduction and provision of soil testing laboratories .. They also discussed about the benefits of e-NAM for stakeholders including farmers were more option for selling produce, traders were access to larger national market for secondary trading and buyers, processers and exporter enable participation directly trading and reducing intermediation cost. M/S Nagarjuna fertilizers and chemical LTD. is the strategic partner and responsible for development, operation and maintenance of the platform. They concluded that government should be carried out reforms both in letter and spirit for successful implementation of E-NAM.

Reddy (2016) undertook the study entitled "Impact of e-markets in Karnataka, India" and examined e-markets in Karnataka with the objectives of knowing opinion of farmers, traders, commission agents and market committee about e-markets, identifying best practices, procedure, progress and bottlenecks in implementation, impact on prices and market arrivals, transparency competition, collusion, timeliness and universal participation by intensively analyzing groundnut markets in selected 16 e-markets and 16 non-e-markets in study area. The study used the month wise price data collected from AGMARKNET for the period 2007 to 2015 and applied 'difference –in-difference' methodology to compare the e-markets with non-e-markets in prices and arrivals. The results of the study showed that automation of auction process was increased which helped in increased transparency. That increased transparency and reduced delay in payment attracted market arrivals in to e-markets compared to non-e-markets. The study revealed that there was 128 per cent increase in average prices in e-markets compared to only 88 per cent in non-e-markets between 2007 and 2015 with a significant reduction in price variability in e-markets. The competition among traders was increased and scope for collusion was reduced.

Number of bids per lot from about six to eleven was also increased. The study suggested increasing awareness about the e-market processes and benefits to the farmers. Most of the farmers were favor in e-markets and expressed their concern about the utility of the e-market system.

Bachaspati and Pathak (2018) conducted their study in Chhattisgarh district by purposively selecting Bhatapara APMC in Baloda Bazar district for assessing the market profile and status of e-NAM in the selected APMC study area. They also examined the arrival and prices of major commodities before and after e-NAM in Bhatapara APMC. The study was based on Primary as well as secondary data. The results showed that Bhatapara APMC was established in 1964. There were 35 permanent staff members and 289 commodity wise processing units in the market area. There were 21commodities notified under regulation in Bhatapara APMC. There was no provision of cold storage facilities in the selected APMC. The study revealed that Paddy was the major commodity arrived in highest quantity in Bhatapara APMC followed by gram. They observed the 8.01 percent decrease in paddy arrival after post unification as the reason was that buyers used to physically checking paddy lots arrived for sale for quality parameters. They also revealed that highest increase in arrival was in mustard followed by red gram, lentil, gram and wheat. The results of the study also showed the 14.65 percent increase in price of paddy while wheat, red gram and lentil shown decrease in prices after post unification.

Deshmukh et al. (2018) in their study focused on“ e-NAM: connecting link to the domestic Indian agricultural markets” and revealed that NAM is a virtual market which has a physical market at the back end focusing on to get better price for their farm produce. As on 23rd march 2018, the government had reached of linking total 585 mandis on e-NAM platform. Through e-NAM 73.50 lakh farmers, 1.01 lakh traders and 53163 middleman/arhatias were registered and 1.52 MT of produce was traded. The total value of traded produce was Rs.36,275 crores. They revealed that formation of the National Agriculture Market is a landmark initiative and if e-NAM become fully operational throughout the country, the eventual goal of ‘ One nation One market will become a reality. The study described that various agencies were participating in functioning of e-NAM such as small farmers agribusiness consortium, Directorate of marketing and inspection, national informatics centre, strategic partner, state government/ UT administration, state agricultural marketing board/ directorate of agricultural marketing and

Agriculture Produce Marketing Committee. The study discussed about the major constraints on implementation of e-NAM as equalities in grades and standards, monopolistic of rural markets, lack of coordination of market agencies and market services, synchronizing value chain , poor literacy rate of market performers, integrated development of market participants, lack of coordination of market agencies and market services, monopolistic of rural markets and issues with states regarding e-NAM rules and regulation. They also described the pathways to integrate farmers to e-market such as linkages with market, good governance, innovations, producer organization to offer vital link to market information and adopting model agriculture produce livestock market act 2017 etc.

Roshini et al. (2018) focused on the implementation of e-NAM and its progress in India. They used secondary data and found that in first pilot phase, on 14th April, 2016 E-NAM was implemented in 23 APMC in 8 state of India. They revealed a total 585 markets were targeted for integration by March 2018 and a total of 455 were covered by May 2017. The state Uttar Pradesh stood at first position with 100 markets and Uttrakhand touched the bottom line with 5 markets. A total 90 commodities were notified for trading on E-NAM platform. In terms of trade, Gujarat was leading with 7441.7 tons of quantity traded amounting to a total trade value of 14117.05 crore followed by Uttrakhand while Odisha was lagging with 0.63 tons of quantity traded amounting to a meager 1.11 crore of trade value. E-NAM enhanced the quality of marketing by reducing the regional barriers throughout the nation to achieve the “one nation one market” goal of government. With open and competitive price fixing, fair pricing of products was possible due to transparency of markets and reduced interference of middlemen. It helped in maintenance of product quality by minimizing the physical damage. They also suggested to improvement of e-NAM, government must try to overcome the entire problem related to marketing by introducing e-NAM in collaboration with APMC.

Bhusanar and Singh (2019) conducted a study entitled “e-NAM: A Reforming Agriculture Market” to study the intention taken by the government under the e-NAM portal, E-NAM operating system and major objectives of e-NAM benefits of e-NAM to the farmers for increase their livelihood and increases the effectiveness of agriculture market. They also showed in their study the current status of e-NAM in India and the present challenges of e-NAM. The study was based on secondary data collected from various sources such as websites, annual

reports, research reports and existed survey. They described about e-NAM operation and revealed that a special software developed for e-NAM were provided in every market which agrees to join the national network at free of cost. Their study discussed about the benefits of e-NAM such as reducing inter-mediation costs, provided larger national market for secondary trading for local trader and buyers, processor, exporters were also benefits from being able to participate directly trading in NAM platform .They revealed that in first phase 21 mandis in eight state were targeted with RS.200 crore budget allocation, 25 key agro-produce including wheat , paddy , onion, jowar and maize, onion, jowar, bajra, groundnut, potato, soybean and mustard seed were chosen for e-trading. As on May, 2018, 585 regulated mandis in 14 states were linked with the e-NAM. 73.50 lakh farmers, 53163 commission agents and over 1 lakh traders were registered on it from these 14 states. They concluded that if e-NAM becomes fully operational throughout the country then the goals of 'one nation, one market for agricultural product, will become a reality and reforms in agricultural markets will help the country to meet the current challenges posed by global markets.

Kathayat (2019) had undertaken their study "Performance of regulated Markets in Odisha Under New Agricultural Marketing Reforms Regime" in five markets selected from different districts in the Odisha state to study the performance of existing regulated markets, scope of e-NAM and various constraints faced by the farmers to market their produce in the state. The study was based on both types of data primary and secondary. The primary information mainly pertaining to the operational aspect of e-NAM system was collected by interviewing farmers in February 2018 from Sakhigopal market and OSAM Board, Bhubaneswar. Secondary data relating to the objective of the study were collected from respective APMCs as well as AGMARK portal. The study found that there were a total of 67 RMCs functional in the state. The average number of villages served by per regulated market was found 424 which was still higher than all India average of 258 villages per regulated market. The study revealed that there was a huge gap between average area served by regulated market in Odisha and national average area of 487.40 sq. km per regulated market. Arrivals pattern of selected commodities are shown mixed trend while prices were rising over the years. The study showed that high transportation cost, lack of market information and remunerative price were the major constraints ranked by the farmers in the study area. The study also observed that the required infrastructure was being developed and e-NAM in the state was still in nascent stage.

The study also suggested putting more emphasis in conducting market research time to time in the state to assess the efficiency of the existing regulated markets.

Meena et al. (2019) worked on "National Agricultural market (e-NAM): Initiative towards doubling the farmers' income in India" and reviewed the status, functioning of e-NAM and assessed the impact of e-NAM on price received by farmers and market arrivals through earlier studies. The study was based on secondary data. They discussed the objectives, benefits, components and the workflow of APMC with e-NAM. The study also described the status of registered unified license and stakeholders on e-NAM and Out of total 585 markets under e-NAM, maximum share was of Uttar Pradesh (17.09 %) followed by Gujarat (13.50%) and Maharashtra (10.26%) while other states contributed less than 10 per cent. As regards total stakeholders of market, Uttar Pradesh was at top position followed by Madhya Pradesh and Haryana. Top three states Rajasthan, Telangana and Uttrakhand were in India for issuing maximum licenses by authorities while Chandigarh, Gujarat, Maharashtra, Pondicherry, Punjab, Tamil Nadu and West Bengal were not showing interest in issuing licenses for trading. Now inter-Mandi trade within e-NAM states were happening in 196 mandies of 10 e-NAM states. The very first inter-state transaction on e-NAM in India had been recorded between trader of Bareilly e-NAM APMC of Uttar Pradesh and farmer of Haldwani e-NAM APMC of Uttarakhand for trade in tomatoes. The study revealed that Inter-state trade can take place in all 124 commodities promoted on e-NAM platform. Approximately 136 inter-state transactions & 14 commodities which included vegetables, pulses, cereals, oilseeds, spices etc. had been traded under inter–state trade through e-NAM platform in a short span of time. After reviewing some case studies the study stated that E-NAM is still at nascent stage in India and the most important challenge in front of Indian Government is to convert non e-NAM mandies into e-NAM mandies. The study also highlighted the hindrances and challenges in implementation of name such as constitutional, assaying and grading infrastructure, unified trade licensing, single point levy, quality, capacity building of market participants, harmonization of grades and standards, integrating value chains and capacity building of market participants etc.

Review of literature discussed as above shows that the researchers have taken up various issues relating to the Electronic National Agriculture Market and highlighted the various problems related to this. The various researchers observed in their study that Electronic National

Agriculture Market has grown significantly over time and positively impacted the farmers, traders and commission agents. They found that online trading system has proved as a beacon of light for the overall upliftment of the farming community. The researchers also found that if the e-NAM becomes fully operational throughout the country, the goal of 'One Nation One Market will become a reality. This central sector scheme is also being implementing in Haryana and farmer, traders and commission agents are facilitated with its services; however a few studies had been conducted in Haryana. So, the present study will fill up the research gap, on the topic of "A analysis of Electronic National Agriculture Market in Haryana". So, after reviewing the various issues covered by earlier studies, the present study will undertake the issues like operation, functioning, impact on prices and arrivals of major commodities, impact on farmer's income and constraints faced by stakeholders in operation of e-NAM.

Methodology

The study will be based on primary as well as secondary data. By using appropriate sampling techniques, the representative districts, APMCs/mandis and sample respondents (farmers and traders/commission agents) will be selected. The primary information will be collected from selected respondents through interview schedule method with a well structured and pre-tested schedule. The required secondary information/data will be collected from various published and unpublished sources of Government of India and Haryana including the various departments such as Directorate of Economics and Statistics, Department of Agriculture, Cooperation & Farmers welfare, Ministry of Agriculture and Farmers Welfare, Government of India, Haryana State Agricultural Marketing Board, APMCs/Mandi head offices, selected APMC/Mandi offices, concerned district level authorities and marketing boards etc. The secondary data will also be collected from various relevant published sources and online (AGMARKNET). www.enam.gov.in etc). Some other aspects of study will be covered as per availability of primary and secondary information. The suitable statistical tools and techniques will be used for analysis of data and interpretation of findings

Significance of the Study

The need for the study entitled "Economic Analysis of National Agriculture Market in Haryana" arises from the fact that agriculture sector plays vital role in the state economy of

Haryana and to sustain the growth and economic development of the state economy there is need for agricultural sustainable development. There are many factors which plays important role in sustaining the development of the sector. Systematic agricultural marketing system also plays crucial role in significant growth and development of the sector. Electronic trading platform facilitate farmers, traders and buyers with online trading in commodities. The market is helping in better price discovery and provides facilities for smooth marketing of their produce. Thus the present study is an attempt to cover the various aspects of related to Electronic Agriculture Market in Haryana. This will help to study the extent of operation and adoption of e-NAM in Haryana. The study will also analyze the impact of e-NAM on prices and arrivals of major commodities. It will be helpful in assessing the impact of e-NAM on the income of farmers. The study will also explore the constraints in the operation of e-NAM system will be also helpful in providing important suggestions and guidance for future research as well as for policy formulation and implementation.

Scope of the Study

The present study will try to the extent of operation and adoption of e-NAM of selected APMC in the study area. It will analyse the impact of the e-NAM system by examination of the arrival and prices of major commodities in study area after its implementation of e-NAM. The study will also examine the impact of the e-NAM on the income of farmers. Besides this, it will provide an overview on the infrastructure facilities available at selected e-NAM and constraints faced by stakeholders in e-NAM system. The results of study related to the constraints faced by stakeholders in e-NAM system would be helpful in taking suitable appropriate efforts to strengthen the e-NAM system for the benefits of stakeholders. The Topic has many issues, but some of these will be covered by the present study

Chapterization

Chapter-1 Introduction: It includes background of the topic, significance, objective, and limitations of the study.

Chapter-2 Review of Literature: In this chapter, review of literature related to the specific objectives of the study will be studied and presented.

Chapter-3 Methodology: Area of the study, period of the study, sources of the data, sampling design, statistical tools and techniques used for drawing conclusions will be included in this chapter.

Chapter-4 Extent of the operation, adoption and functioning of e-NAM: In this Chapter, the extent of operation, adoption and functioning of e-NAM of selected major markets will be studied.

Chapter-5 Impact of e-NAM on prices and arrivals of major commodities: In this chapter, the impact of e-NAM on prices and arrivals of major commodities will be analyzed.

Chapter-6 Impact of e-NAM on the income of farmers: In this chapter, the impact of e-NAM on the income of farmers will be assessed.

Chapter-7 Constraints in the operation of e-NAM system: In this chapter, constraints in the operation of e-NAM will be identified.

Chapter-8 Summary and Conclusion: A brief summary along with conclusions and suggestions will be included in this chapter.

References

Bachaspati, Soham and Hulas Pathak (2018), "Impact of e-NAM on arrival & prices of major commodities: a case study of Bhatapara APMC in Chhattisgarh", *Journal of Pharmacognosy and Phytochemistry* **7**(4): 3301-3304.

Bhusanar, S. B. and Ramandeep Singh (2019), "e-NAM: A Reforming Agriculture Market", *Bulletin of Environment, Pharmacology and life Sciences*, **8**(2): 21-24.

Bisen, Jaiprakash and Ranjit Kumar (2018), "Agricultural marketing reforms and e-National Agricultural Market (e-NAM) in India: A review", *Agricultural Economics Research Review*

Deshmukh, K.V., Bandi Sriknth and Kausadikar H.H. (2018), "e-NAM: Connecting link to the Domestic Indian Agricultural Markets", *Plant Archives*, ***18***(2):1911-1914.

Kathayat, Babita (2019), "Performance of Regulated Markets in Odisha Under New Agricultural Marketing Reforms Regime", *Economic Affairs* **64**(2): 291-295.

Kumar, Neeraj, Amit Kumar and Sachin Tyagi (2016), "e-NAM : Connecting Farmers and Traders", *Rashtriya Krishi* **11**(2): 61-62.

Mathew, A.M. and G. Raju (2020), "E -NAM- An Innovative Business Model for Agriculture Sector in India", *Our Heritage* **68 (**18**)**: 177-183.

Meena, G. L., S. S. Burark, Hari Singh and Latika Sharma (2019), "Electronic –National Agricultural Market (e-NAM): Initiative towards Doubling the Farmers' Income in India" , *International Archive of Applied Sciences and Technology* **10**(2): 162-171.

Reddy, A. Amarender (2016), "Impact of e-market in Karnataka, India", *Indian Journal of Agriculture Marketing* **30**(2): 31-44.

Reddy, A. Amarender (2018), "Electronic National Agricultural Markets: the way forward", *Current Science* **115**(5): 826-837.

Reddy, A. Amarender and Mehjabeen (2019), "Electronic National Agricultural Markets, Impacts, Problems and Way Forward", *IIM Kozhikoda Society & Management Review Sage* **8**(2): 143-155.

Roshini, S., S.S. Behera and U. Mohapatra (2018), " e-NAM in Agriculture Marketing –An Overview", *International Journal of Current Research,***10 (**2): 65276-65278.

Sekhar, C. S. C. and Yogesh Bhatt (2018), "Electronic National Agricultural Market (e-NAM): A Review of Performance and Prospects in Haryana" Agricultural Economics Research Centre, University of Delhi. Retrieved from http://du.ac.in/du/uploads/Centre/Report_Final_AERC_Delhi_eNAM-2018.pdf on 2nd February 2020.

Thankachan Sumitha and S. Kirubakaran (2014), "A Survey Conducted on E-Agriculture with Indian Farmers", *International Journal of Computer Science and Mobile Computing*, **3**(2): 8-14.

Tyngkan, Hehlangki (2018), "Impact of Electronic- National Agriculture Market (e-NAM) on the Income of Farmers in Raipur and Dhamtari Agricultural Produce Market committees (APMCs) of Chhattisgarh", *Thesis for partial fulfilment of the requirements for the Degree of Master of Science (Agriculture) in Agricultural Economics*, Department of Agricultural Economics, Indira Gandhi Krishi Vishwavidyalaya, Raipur (Chhattisgarh). Retrieved From http://krishikosh.egranth.ac.in/handle/1/5810061114.

Yadav, J. P. and Abhishek Sharma (2017), "National Agriculture Market: The Game Changer for Indian Farming Community", *International Journal of Scientific Research and Management*, **5**(7): 5810-5815.

https://www.enam.gov.in/

http://agricoop.nic.in/sites/default/files/apmc.pdf

http://dmi.gov.in/Documents/Draft_Model_APMC_Act_2016.pdf

https://enam.gov.in/web/stakeholders-Involved/Apmcs

http://hsamb.org.in/

https://agmarknet.gov.in/Default.aspx

http://esaharyana.gov.in/en-us/State-Statistical-Abstract-of-Haryana.

http://esaharyana.gov.in/en-us/Economic-Survey-of-Haryana.